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SEP 19 2001

# TRANSMITTAL FORM

(To be used for all correspondence  
after initial filing)

Application Number	09/831,855
Filing Date	August 23, 2001
First Named Inventor	Pratima Pai
Group Art Unit	
Examiner Name	
Attorney Docket No.	851663.426USPC

SEP 26 2001

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Technology Center 2999

## ENCLOSURES (check all that apply)

- |  |   |  |
|--|---|--|
| <input checked="" type="checkbox"/> Fee Transmittal Form<br><input checked="" type="checkbox"/> Fee Attached<br><input checked="" type="checkbox"/> Amendment/Response<br><input type="checkbox"/> After Final<br><input type="checkbox"/> Affidavits/declaration(s)<br><input type="checkbox"/> Extension of Time Request<br><input type="checkbox"/> Express Abandonment Request<br><input type="checkbox"/> Information Disclosure Statement; Form PTO-1449<br><input type="checkbox"/> Cited References<br><input type="checkbox"/> Certified Copy of Priority Document(s)<br><input type="checkbox"/> Response to Missing Parts under 37 C.F.R. 1.52 or 1.53<br><input type="checkbox"/> Response to Missing Parts/Incomplete Application | <input type="checkbox"/> Assignment Papers (for an Application)<br><input type="checkbox"/> Drawing(s)<br><input type="checkbox"/> Request for Corrected Filing Receipt<br><input type="checkbox"/> Licensing-related Papers<br><input type="checkbox"/> Petition<br><input type="checkbox"/> Petition to Convert to a Provisional Application<br><input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address<br><input type="checkbox"/> Declaration<br><input type="checkbox"/> Statement under 37 CFR 3.73(b)<br><input type="checkbox"/> Terminal Disclaimer<br><input type="checkbox"/> Small Entity Statement<br><input type="checkbox"/> Request for Refund | <input type="checkbox"/> CD(s), Number of CD(s) _____<br><input type="checkbox"/> After Allowance Communication to Group<br><input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences<br><input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)<br><input type="checkbox"/> Proprietary Information<br><input type="checkbox"/> Status Letter<br><input checked="" type="checkbox"/> Return Receipt Postcard<br><input type="checkbox"/> Additional Enclosure(s) (please identify below):<br><hr/> <hr/> <hr/> <hr/> <hr/> |
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## Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Individual Name	E. Russell Tarleton	 <b>00500</b> <small>PATENT TRADEMARK OFFICE</small>
Signature		
Date	September 19, 2001	

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on the date specified below.

Typed or printed name		
Signature		Date:



# FEE TRANSMITTAL for FY 2001

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$ 400)

Complete if Known	
Application Number	09/831,855
Filing Date	August 23, 2001
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METHOD OF PAYMENT				FEE CALCULATION (continued)																																																																																																																																																																																																			
<p>1. <input type="checkbox"/> The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:</p> <p>Deposit Account Number <b>19-1090</b></p> <p>Deposit Account Name <b>Seed Intellectual Property Law Group PLLC</b></p> <p><input checked="" type="checkbox"/> Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17 and credit any overpayment to Deposit Account Number above.</p> <p><input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27</p>				<p>3. ADDITIONAL FEES</p> <table border="1"> <thead> <tr> <th>Large Entity</th> <th>Small Entity</th> <th colspan="2">Fee Description</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> </tr> </thead> <tbody> <tr><td>105</td><td>130</td><td>205</td><td>65</td><td colspan="2">Surcharge - late filing fee or oath</td></tr> <tr><td>127</td><td>50</td><td>227</td><td>25</td><td colspan="2">Surcharge - late provisional filing fee or cover sheet.</td></tr> <tr><td>139</td><td>130</td><td>139</td><td>130</td><td colspan="2">Non-English specification</td></tr> <tr><td>147</td><td>2,520</td><td>147</td><td>2,520</td><td colspan="2">For filing a request for ex parte reexamination</td></tr> <tr><td>112</td><td>920*</td><td>112</td><td>920*</td><td colspan="2">Requesting publication of SIR prior to Examiner action</td></tr> <tr><td>113</td><td>1,840*</td><td>113</td><td>1,840*</td><td colspan="2">Requesting publication of SIR after Examiner action</td></tr> <tr><td>115</td><td>110</td><td>215</td><td>55</td><td colspan="2">Extension for reply within first month</td></tr> <tr><td>116</td><td>390</td><td>216</td><td>195</td><td colspan="2">Extension for reply within second month</td></tr> <tr><td>117</td><td>890</td><td>217</td><td>445</td><td colspan="2">Extension for reply within third month</td></tr> <tr><td>118</td><td>1,390</td><td>218</td><td>695</td><td colspan="2">Extension for reply within fourth month</td></tr> <tr><td>128</td><td>1,890</td><td>228</td><td>945</td><td colspan="2">Extension for reply within fifth month</td></tr> <tr><td>119</td><td>310</td><td>219</td><td>155</td><td colspan="2">Notice of Appeal</td></tr> <tr><td>120</td><td>310</td><td>220</td><td>155</td><td colspan="2">Filing a brief in support of an appeal</td></tr> <tr><td>121</td><td>270</td><td>221</td><td>135</td><td colspan="2">Request for oral hearing</td></tr> <tr><td>138</td><td>1,510</td><td>138</td><td>1,510</td><td colspan="2">Petition to institute a public use proceeding</td></tr> <tr><td>140</td><td>110</td><td>240</td><td>55</td><td colspan="2">Petition to revive – unavoidable</td></tr> <tr><td>141</td><td>1,240</td><td>241</td><td>620</td><td colspan="2">Petition to revive – unintentional</td></tr> <tr><td>142</td><td>1,240</td><td>242</td><td>620</td><td colspan="2">Utility issue fee (or reissue)</td></tr> <tr><td>143</td><td>440</td><td>243</td><td>220</td><td colspan="2">Design issue fee</td></tr> <tr><td>144</td><td>600</td><td>244</td><td>300</td><td colspan="2">Plant issue fee</td></tr> <tr><td>122</td><td>130</td><td>122</td><td>130</td><td colspan="2">Petitions to the Commissioner</td></tr> <tr><td>123</td><td>130</td><td>123</td><td>130</td><td colspan="2">Petitions related to provisional applications</td></tr> <tr><td>126</td><td>180</td><td>126</td><td>180</td><td colspan="2">Submission of Information Disclosure Stmt</td></tr> <tr><td>581</td><td>40</td><td>581</td><td>40</td><td colspan="2">Recording each patent assignment per property (times number of properties)</td></tr> <tr><td>146</td><td>710</td><td>246</td><td>355</td><td colspan="2">Filing a submission after final rejection (37 CFR § 1.129(a))</td></tr> <tr><td>149</td><td>710</td><td>249</td><td>355</td><td colspan="2">For each additional invention to be examined (37 CFR § 1.129(b))</td></tr> <tr><td>179</td><td>710</td><td>279</td><td>355</td><td colspan="2">Request for Continued Examination (RCE)</td></tr> <tr><td>169</td><td>900</td><td>169</td><td>900</td><td colspan="2">Request for expedited examination of a design application</td></tr> <tr> <td colspan="4">Other fee (specify) _____</td> <td colspan="4">*Reduced by Basic Filing Fee Paid</td> </tr> <tr> <td colspan="4"></td> <td colspan="4">SUBTOTAL (3) (\$ 0)</td> </tr> </tbody> </table>				Large Entity	Small Entity	Fee Description		Fee Code	Fee (\$)	Fee Code	Fee (\$)	105	130	205	65	Surcharge - late filing fee or oath		127	50	227	25	Surcharge - late provisional filing fee or cover sheet.		139	130	139	130	Non-English specification		147	2,520	147	2,520	For filing a request for ex parte reexamination		112	920*	112	920*	Requesting publication of SIR prior to Examiner action		113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action		115	110	215	55	Extension for reply within first month		116	390	216	195	Extension for reply within second month		117	890	217	445	Extension for reply within third month		118	1,390	218	695	Extension for reply within fourth month		128	1,890	228	945	Extension for reply within fifth month		119	310	219	155	Notice of Appeal		120	310	220	155	Filing a brief in support of an appeal		121	270	221	135	Request for oral hearing		138	1,510	138	1,510	Petition to institute a public use proceeding		140	110	240	55	Petition to revive – unavoidable		141	1,240	241	620	Petition to revive – unintentional		142	1,240	242	620	Utility issue fee (or reissue)		143	440	243	220	Design issue fee		144	600	244	300	Plant issue fee		122	130	122	130	Petitions to the Commissioner		123	130	123	130	Petitions related to provisional applications		126	180	126	180	Submission of Information Disclosure Stmt		581	40	581	40	Recording each patent assignment per property (times number of properties)		146	710	246	355	Filing a submission after final rejection (37 CFR § 1.129(a))		149	710	249	355	For each additional invention to be examined (37 CFR § 1.129(b))		179	710	279	355	Request for Continued Examination (RCE)		169	900	169	900	Request for expedited examination of a design application		Other fee (specify) _____				*Reduced by Basic Filing Fee Paid								SUBTOTAL (3) (\$ 0)			
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\*\*or number previously paid, if greater; For Reissues, see above

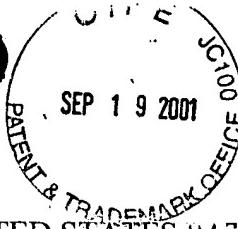
SUBMITTED BY			
Name (Print/Type)	<b>E. Russell Tarleton</b>		Registration No. Attorney/Agent) <b>31,800</b>
Firm Name/ Address			
Signature		Date	September 19, 2001



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EX-105 MAIL NO. EL897870199US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Pratima Pai et al.  
Application No. : 09/831,855  
Filed : August 23, 2001  
For : METHODS OF EFFICIENT IMPLEMENTATION OF TRELLIS  
BASED SPECTRAL SHAPING WITH LOOKAHEAD

Docket No. : 851663.426USPC  
Date : September 19, 2001

Commissioner for Patents  
Washington, DC 20231

#5/A  
J. M. AUC/LS  
11-6-01  
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PRELIMINARY AMENDMENT

Commissioner for Patents:

Please amend the above-identified application as follows:

In the Specification:

Paragraph beginning at line 7 of page 1 has been amended as follows:

This invention relates to systems and methods for spectral shaping of signals in communications systems, and it is particularly applicable to data communication equipment like a modem.

Paragraph beginning at line 6 of page 2 has been amended as follows:

In accordance with an embodiment of the present invention, there is provided a method of coding digital data for transmission according to a trellis coding system having a predetermined number of (N) states and a predetermined number of (M) state transitions from each state, wherein the data is arranged in a series of frames, a state is associated with each frame to determine a coding strategy for the frame, and a look-ahead depth (D) representing a number of data frames is selected, including: